

All Recommendations

Tuesday, October 02, 2012 9:17:28 AM

Record #	ABU	Unit	I/R	Item Nbr	Additional Consideration (Recommendation)	ABU Proposal	Resolution	Verifier Comments	Verifier Name	Verified On	Due Date	RR	SOE	Assigned To	Status
16315	D&R	#4 Crude Unit	2nd Revalidation	23	Concern: The new Agar probe and associated high water alarm are not reliable. Consider addressing this problem.	1) By 9/1/06 Ken Walker - Work with Maintenance to set- up and implement a periodic PM.to improve the reliability of the Agar probe. 2) By 3/1/05 Garth Jolly to Determine scope for 2006 s/d to consider a back-up means of determining high water content NOTE: Both tasks will need to be documented as completed prior to signing this action item off.(SLC uses radioactive gravity analyzer for the determination of high water content.)	NOTE: Both tasks will need to be documented as completed prior to signing this action item off. 1)As of 04/04/2006 a Quarterly "PM" has been implemented to Calibrate analyzer 08A1705 Agar Probes. Completed and implemented by Kenneth Walker and Tony Vink. 2) It is on the 2006 shutdown worklist to install three nozzles for agar probes in V1102 and also a new capacitance probe for level monitoring. Ewo#Be604-E1 on 4CU W/O log, and electronic EWO#1735	Quarterly "PM" implemented on Crude feed line Agar probe. Ewo#Be604-E1 on 4CU W/O log, and electronic EWO#1735 for V1102 improvements during 4th 2006 4CU T/A	Walker, Kenneth B.	4/4/2006	9/1/2006	3	S	Walker, Kenneth B.	Completed
16316	D&R	#4 Crude Unit	2nd Revalidation	16	The concern is there is a need for additional training on RMPCT and DQP in regards to control strategy for operating the crude unit. Consider providing additional training on these control systems.	1) Jim Zarbis --coordinate installation of training simulators. 2) Ken Walker - develop training material for simulators. 3) Fred DeMarse -develop logic tree diagram or other training aide to explain RMPCT control moves	NOTE: All 3 tasks must be completed prior to signing this item "complete" Training aids on EOM page and Fred did a hands on training the DQP has been operational duringthe months of may and june	No additional concerns	Zarbis, James T.	8/25/2006	10/24/2006	5	O	Zarbis, James T.	Completed
16318	D&R	#4 Crude Unit	2nd Revalidation	15	Concern is that the existing Drexelbrook probe still is not functioning properly and is contributing to poor desalter operation. Consider improving probe reliability.	Garth Jolly -determine 2006 s/d worklist scope.	Combination of Drexelbrook and Agar probe to be used on Desalter. Design agreed upon by I&E. To be installed on 4Q06 Shutdown.	Considered and placed on S/D wok list	Jolly, Garth	5/3/2006	3/1/2006	3	O	Jolly, Garth	Completed
16319	D&R	#4 Crude Unit	2nd Revalidation	18	Concern is incomplete removal of HC/benzene from C-1180. Consider reducing pressure losses associated with PV-080 and piping to allow operation of C-1180 at lower pressures to increase flashing of light HCs.	C-1180 overhead system is presently restricted by a 2" section of piping near the inlet of destination vessel V-3211. This pping will be upsized to match the 4" inlet nozzle on V-3211.	D&R S/D EWO #1761 removes the 2" section of the C-1180 overhead piping and replaces with 4" to match the nozzle of the destination vessel V-3211. This work is approved and is presently on the work list to be performed during the upcoming 1Q/07 planned SD event. THIS WORK WILL BE DONE.	work on S/D list	Curry, David P.	6/21/2006	3/1/2006	4	O	Post, Ronald W.	Completed

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16320	D&R	#4 Crude Unit	2nd Revalidation	8	Concern is a delayed startup due to the slow pumpout capabilities of the vessel (V-1109) associated with the excess liquid present during startup. Consider modifying the startup and shutdown procedure to prevent excess water in V-1109	Ken Walker - Modify start-up procedures for routing V1160 to V1109 to prevent excess liquid build up.	This issue is denied do to other process concerns during startup that has caused this problem in the past. Improvement in startup techniques via procedure modifications will alleviate this issue.	This issue is denied do to other process concerns during startup that has caused this problem in the past. Improvement in startup techniques via procedure modifications will alleviate this issue.	King, Lowell J.	4/4/2006	9/24/2006	3	O	Walker, Kenneth B.	Completed
16323	D&R	#4 Crude Unit	2nd Revalidation	14	Concern is that the ability to remotely activate smothering steam from the control board was never activated following completion of the FSC project. Consider finishing installation of the control board activation facilities.	Ed Burghardt – finish installation and test system for operation.	Per review of the FSSD project and Ed Shepherd, house control of smothering steam was not recommended for the furnaces due to not needing it for all FSSD cases and the recommendation to make sure an operator was in control of the steam and able to make sure the line was free of liquid before starting up. Since the HICs will not be used, a spool will be installed in place of the HICs. Control board activation of the steam will not be done.	It has been agreed to by Furnace best practice , Two Head Operators , Op's Supervisor, AS, Section Head. To remove the control valves.	Curry, David P.	9/28/2006	9/4/2006	5	S	Burghardt, Edward L.	Completed
16324	D&R	#4 Crude Unit	2nd Revalidation	21	Concern is that presence of water in fuel gas can still lead to plugging leading to furnace upsets and un-necessary work for maintenance personnel. Consider installing blowdown facilities to drain water from the low points of the fuel gas header.	Jim Zarbis / Ed Shepherd / Garth Jolly – determine 2006 s/d work list scope. Ken Walker – work with Operations to blow down header on a periodic basis. (interim fix) Note: Both items need to be completed prior to signing this off as complete	Fuel Gas system to be chemical cleaned during 1Q 2007 S/D	No further considerations	Zarbis, James T.	8/25/2006	9/24/2006	5	O	Zarbis, James T.	Completed
16325	D&R	#4 Crude Unit	2nd Revalidation	42	Concern is harmonics associated with F-1100A/B and F-1160 will lead to furnace incidents. Consider developing a plan to deal with harmonic oscillations on the furnace leading to Training and Procedures for operators.	Ed Shepherd – develop EOM info for Operators to use to correct situation.	Completed Burner upgrades added start up tips to take us through the critical temperature. Tested and successfully completed	No additional concerns	Zarbis, James T.	8/25/2006	9/24/2006	5	S	Zarbis, James T.	Completed

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16326	D&R	#4 Crude Unit	2nd Revalidation	13	Concern is that without knowing the exact concentration of caustic that is provided from EOD and injected into the secondary heat train, residual chlorides may still be present creating corrosion. Consider confirming the concentration associated with each caustic batch transfer. In addition, provide Training and Procedures to operations to effectively vary injection rates depending on caustic concentration.	Garth Jolly - research 2004 test run for spent caustic vs. chloride control. Issue PED Reco.	Verified with Garth findings were published and sent out to crews.tcm 5/2/06	Lead engineer emailed doc sent to crews last year for records.	Marshall, Tywan C.	5/11/2006	5/1/2006	5	S	Jolly, Garth	Completed
16327	D&R	#4 Crude Unit	2nd Revalidation	11	Concern is that line-ups to P-1129A suction and discharge are not clearly labeled in the field. This could result in the mis-manifolding of the pump. Consider properly labeling suction and discharge of P-1129A.	Lowell King - issue Passport work request to fab and install labels. Labels to be installed by 9/24/06	Tags are in place. Verified 11/3/05	Tags are in place verified 11/3/05	King, Lowell J.	11/3/2005	12/31/2005	5	O	King, Lowell J.	Completed
16328	D&R	#4 Crude Unit	2nd Revalidation	14	Concern that no formalized training and procedures are in place on how to drain oil from the sump of applicable pumps. Consider developing T/P on this subject.	Mike Klein/James TRail - coordinate with Division Maintenance on implementing the Four Senses training.	4 Senses training dates are being set up with Maintenance and Operations. The plan will be to complete them before the end of the year.	4 senses training dates are being set up by Mike Klein and James Trail for the 4Q06.	Capshaw, Michelle L.	10/9/2006	10/1/2006	3	S	Curry, David P.	Completed

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16329	D&R	#4 Crude Unit	2nd Revalidation	24	Concern is that we may be under the minimum velocity required for the tubes. Consider evaluating whether operation should be with one or two banks of the E-1116s.	Ron Post / Garth Jolly - issue findings on velocity study to Operations. The E-1116 HX's are arranged in two parallel banks of three units each. It is likeley that use of both banks does create lower than optimum flow thru tubeside. However use of one bank does not allow Crude Unit to feed desired rates. Low tubeside velocities MAY create an environment more prone to plugging however this should not be associated to increased risk to people. Four of these bundles were recently replaced with SS bundles which are expected reduce fouling tendencies.	Four of these bundles were recently replaced with SS bundles which are expected reduce fouling tendencies.	E-1116 new stainless steel bundles added	Curry, David P.	6/21/2006	12/31/2005	5	O	Post, Ronald W.	Completed
16330	D&R	#4 Crude Unit	2nd Revalidation	1	Concern is additional time is now required to add ABCR to V-1103 in an emergency due to additional block valves in the field. Consider automation of block valves or conduct new/revised training on the need to unblock valves in the event of an emergency.	Ken Walker – field walk to clarify concern in field. Larry Cawthorn – modify procedures to reflect additional valves. Larry – capture repair of block valves to 2006 s/d work list, as appropriate. Ensure both tasks have been completed prior to signing this off as complete	Procedures modified to address use of manifold. Valves captured on valve list and Control valve list for the 2006 4CU T/A	Procedures modified to address use of manifold. Valves captured on valve list and Control valve list for the 2006 4CU T/A	Cawthorn, Lawrence G.	4/4/2006	3/1/2006	5	O	Walker, Kenneth B.	Completed
16331	D&R	#4 Crude Unit	2nd Revalidation	1	Concern is that there is no APS system on P-1139 and P-1149A. In addition, there is no Feed Surge Drum which compounds the issue. Consider installation of an APS system for these pumps.	Declined: An APS system on a shared spare pump is a safety issue as piping manifold alignment changes (3s/c service, 4 s/c service).				9/30/2006		5	O	Zarbis, James T.	Declined

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16332	D&R	#4 Crude Unit	2nd Revalidation	8	Concern is that rates must be reduced when operating on pump P-1139.	Dave Curry - capture new separate pump installation for a planned s/d following the 2006 s/d. (this is a long lead item due to electrical system limitations in the ABU)	A New P-1139 upgraded pump will not be installed this shutdown period due to Electrical infrastructure. We do not have enough Electrical power available. There is a project in the works to upgrade D&R. it is 3-5 years off. The rates may still need to be reduce if P-1139 is O/S	as noted above.	Zarbis, James T.	8/29/2006	9/24/2006	4	O	Curry, David P.	Completed
16333	D&R	#4 Crude Unit	2nd Revalidation	11	Concern that the temporary blowdown piping on the suction line to P-1177A is installed differently each shut down and design is inadequate. Hot condensate is directed towards operating personnel, system is difficult to operate, and noise level is very high. Large vapor cloud is created and visibility is reduced. Potential for employee/contractor injury is very high. Consider designing permanent system to route to steam/condensate to location further away from unit to mitigate the risks. Another option is to route to an existing condensate recovery system.	Ron Post / Larry Cawthorn -conduct a field walk; For 2006 s/d; install hard pipe that routes away from operating areas, to remote area. Find other locations for future s/d's	added to S/D list	added to s/d list	Marshall, Tywan C.	6/21/2006	4/1/2006	3	S	Post, Ronald W.	Completed
16334	D&R	#4 Crude Unit	2nd Revalidation	3	Concern is that the spare pump P-526A is smaller than the primary pump. A potential for a LPO exists. Consider increasing the size of the spare pump (steam operated).	Declined; 2006 s/d work list items address VTCR C-1160 exchanger repairs. Once the repairs are complete, demand for CW will decrease, consequence of using smaller pump will decrease.				9/30/2006		4	O	Zarbis, James T.	Declined

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16335	D&R	#4 Crude Unit	2nd Revalidation	3	Concern is that there are modes of operation where two pump operation is required for extended periods. Loss of one pump can lead to issues described in consequence section. Consider evaluating options to either reduce flows so that single pump operation is possible OR increase the sizing of the pumps (P-1160/A)	Declined; 2006 s/d work list items address C1160 repairs. Once the repairs are complete, slop oil production will decline				10/26/2006	5	E		Zarbis, James T.	Declined
16336	D&R	#4 Crude Unit	2nd Revalidation	2	Concern is that the APS system on P-1165/A still does not work at this time. Consider redesigning APS system on P-1165/A.	Ron Post – capture item for engineering job log. (work is currently in progress)	A approved worklist item to repair the P-1165/A APS system is a 1Q2007 approved T/A item with a compelled EWO. EWO confirmation by Ron Post and Craig Dillon. The A/C is accepted.	Compited EWO package currently is in the shutdown work list	Curry, David P.	9/28/2006	9/24/2006	5	S	Post, Ronald W.	Completed
16337	D&R	#4 Crude Unit	2nd Revalidation	18	Concern is that the LOTO procedure does not address equipment that may solidify if allowed to cool. Consider modifying Richmond LOTO procedure to ensure learnings from ES incident are incorporated.	Ken Walker – Verify procedures are in place to ensure steam tracing is in service. Carl Simmers – contact ES to see if any findings can be shared.	RI-9900 section 5.5 addresses cleaning equipment prior to release	No additional concerns	Zarbis, James T.	8/25/2006	9/24/2006	3	S	Walker, Kenneth B.	Completed

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16338	D&R	#4 Crude Unit	2nd Revalidation	19	<p>Concern is that the P-1165's do not have suction EBV's. Although the P-1165's have suction MOV's, they do not automatically shut down the pumps. EBV's would provide positive isolation on the system. In the event of a fire or leak (example: 2000 incident on leak of P-1165 warm-up line), there would be no positive isolation on C-1160 and the large amount of fuel it could potentially provide.</p> <p>The Chevron Fire protection manual recommends: installation of EBV's on systems where a seal failure could result in a hydrocarbon release, the release could ignite from the hot metal surfaces of the failed seal, or from other nearby sources of ignition. It recommends if the pump is fed from a vessel containing 2,500 gallons of stock or handles stock above 600 deg., or if the hydrocarbon liquid is of a volatile stock or above auto-ignition point, EBV's should be installed. If the pump handles flammable liquids, or the liquid is above its flash point in a congested area EBV's should be installed.</p> <p>During the 1998 turnaround we installed the EBV's on P-1188/A, P-1105/A, P-1128/A and P-1190/A. P-1165/A had EBV's installed on the seal flush but we were unable to complete the installation of the suction EBV's due to piping size modifications required for installation.</p> <p>Consider completion of the EBV installation on the P-1165/A suction during the upcoming shutdown as C-1160 will be out of service and chemically cleaned. A/C still open.</p>	Complete EBV installation on the P-1165/A suction during the upcoming shutdown as C-1160 will be out of service and chemically cleaned. A/C still open. Ron Post - capture item on 2006 s/d work list. (complete) EBV's are on site and scheduled to be installed during upcoming 1Q/06 D&R S/D	EBV's are on site and scheduled to be installed during upcoming 1Q/06 D&R S/D	on s/d list	Curry, David P.	6/21/2006	9/1/2006	3	5	Post, Ronald W.	Completed

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16339	D&R	#4 Crude Unit	2nd Revalidation	10	Concern is that rates must be reduced periodically due to high pressure drops through the exchangers (E-1163A/B, E-1110 A/B) and control valve (LV-061/FV-065). Consider performing an evaluation of the pressure drop losses in equipment and modify piping to rectify if possible.	Complete. Currently have procedure to predict resid yields based on crude throughput. ABU satisfied this addresses a/c.	Currently have procedure to predict resid yields based on crude throughput. ABU satisfied this addresses a/c. Signed off on behalf of J. Zarbis	PED PMO and simulator tool in place to predict resid yields.	Zarbis, James T.	5/23/2006	9/24/2006	4	O	Zarbis, James T.	Completed
16340	D&R	#4 Crude Unit	2nd Revalidation	10	Concern is the current pump (P-1179) had a new impeller installed (MOC# 12604) which may be able to overpressure E-1109 or other downstream equipment under blocked in conditions. Consider verifying if the deadhead pressure of the pump can exceed the design pressure of the downstream equipment.	Ron Post - perform designs engineering study, issue findings and recommendation. Change needs to be implemented by 10/24/06 unless the change requires a planned shutdown to implement.	P-1179 with max impeller (15-1/8" dia) is capable of max discharge press of 389. Current new impeller is 15-1/16" (up from 14-5/8"). E-1109 Tubside Design Press is 395 psi, E-1114 Tubside Design Press is 440 psi. P-1179 even if it had max impeller is not capable of overpressuring downstream equipment.	Eng. Study complete	Curry, David P.	10/9/2006	9/24/2006	5	S	Post, Ronald W.	Completed
16341	D&R	#4 Crude Unit	2nd Revalidation	8	Concern is that P-1171B must be manually started. In addition, there is no spare pump available for this service. Consider modifying P-1171 to start automatically on high level in V-1170 as well as shutdown on low level.	Dave Curry – reinforce training on use of pump in manual mode. (interim fix) Ed Burghardt – install local s/d device with input from level instrumentation. Note: Both items need to be completed prior to signing this as complete.	Completed reinforcement of using pump in manual mode. There is a high level alarm and a high level shutdown on V-1171. There is only a small accumulation of liquid therefore the corrective action of adding a auto start / stop has been declined.	declined as noted above	Zarbis, James T.	8/29/2006	9/24/2006	5	S	Burghardt, Edward L.	Completed
16342	D&R	#4 Crude Unit	2nd Revalidation	19	Concern that operations has expressed a desire for guidelines/procedures on operation of the K-1171/A and K-3950 compressors. Consider providing guidance on managing both column pressure and relief header pressures with the existing compressors.	Bruce Smith - 2007 s/d will comission K242 in relief service; with result of K1171 removed from relief service.	Adde Job aid to EOM # 4CU4750J	No additional concerns	Zarbis, James T.	8/25/2006	9/24/2006	4	E	Zarbis, James T.	Completed

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16343	D&R	#4 Crude Unit	2nd Revalidation	5	Concern is that staging must be built in order to provide backup CW for the E-1160, E-1161 and E-1162s. Consider installation of permanent platform or relocate the valves in a location that is easier to reach.	Ken Walker / Lowell King – field walk; find alternate block valves.	Field walk determined that vacuum condenser water supply and return valves from E3400 are easily accessible. Block in at P526/A (supply) and Return (at CT basin).	Field walk determined that vacuum condenser water supply and return valves from E3400 are easily accessible. Block in at P526/A (supply) and Return (at CT basin).	King, Lowell J.	4/4/2006	9/24/2006	5	O	Walker, Kenneth B.	Completed
16345	D&R	#4 Crude Unit	2nd Revalidation	2	Concern is that consequences described have previously occurred and could re-occur. Consider verifying that procedures are in place such that when crude feed tank switches occur, the offtest line in not lined up to the new crude feed tank. AND Consider commissioning a dedicated offtest tank.	Curry – confirm with T&B procedures to route 10" off test line to appropriate tank. Communicate findings to affected personnel. Dedicated off test tank – declined. Basis: Refinery has 7 tanks in crude service.	The information on not routing the 10" off test header has been added to the Crude orders and the 21 day plan	No additional concerns	Zarbis, James T.	8/25/2006	9/24/2006	4	O	Curry, David P.	Completed
16346	D&R	#4 Crude Unit	2nd Revalidation	6	Concern is that Piping labeling in some areas of the 4 Crude Unit Plant remains poor, leading to possible human error and contamination of processes. Consider labeling the following: 1. All plot limit lines, both upper and lower decks. 2. Resid system. 3. VBCR system. 4. All exchangers in the crude unit (paint has faded). 5. Crude flow through primary and secondary train.	Lowell King – field walk; issue PP to label pipe systems as determined appropriate.	The recommendation to update and improve labeling is accepted and being done.	Line labeling of major lines has been completed by Lowell King, additional line labeling was completed by Frank Perino	Curry, David P.	9/28/2006	9/24/2006	5	O	King, Lowell J.	Completed

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16347	D&R	#4 Crude Unit	2nd Revalidation	7	Concern is the closure of this AC from the 1st revalidation still needs work. Consider volume control on the audible alarm (Control Engineer could activate during startup/shutdowns, etc.). Also consider expanding the low-priority cut-off during startups and shutdowns to lessen the number of alarms.	ABU presently installing software to ID nuisance alarms; Dave Curry - HD / PCO to review in PIT mtgs weekly the nuisance alarms; provide input to Control engineers to correct.	Tracked at Pit meetings and by having the CSA hold informal metings with the crews	Work process in place at the PIT meetings and informal crew meetings. Recent example is suppressing flare visual log alert alarms during darkness hours.	Griffin, Charles T.	5/2/2006	9/24/2006	3	5	Curry, David P.	Completed

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